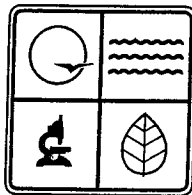


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **092006 - 006** Project Number: **2006-08-045**

Owner: **Versa-Tech, Inc.**

Owner's Address: **701 Sargent Drive, Fredericktown, MO 63645**

Installation Name: **Versa-Tech, Inc.**

Installation Address: **701 Sargent Drive, Fredericktown, MO 63645**

Location Information: **Madison County, S7, T33N, R7E**

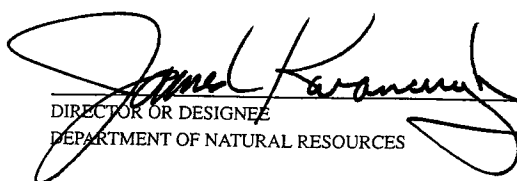
Application for Authority to Construct was made for:

Addition of two (2) new curing silos. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

-
- ☐ Standard Conditions (on reverse) are applicable to this permit.
- ☐ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

SEP 19 2006

EFFECTIVE DATE


DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-08-045

Versa-Tech, Inc.

701 Sargent Drive, Fredericktown, MO 63645

Versa-Tech, Inc.

701 Sargent Drive, Fredericktown, MO 63645

Madison County, S7, T33N, R7E

Addition of two (2) new curing silos. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2006-08-045
Installation ID Number: 123-0022
Permit Number:

Versa-Tech, Inc.
701 Sargent Drive
Fredericktown, MO 63645

Complete: August 11, 2006
Reviewed: September 12, 2006

Parent Company:
Versa-Tech, Inc.
701 Sargent Drive
Fredericktown, MO 63645

Madison County, S7, T33N, R7E

REVIEW SUMMARY

- Versa-Tech, Inc. has applied for authority to add two (2) new curing silos to their existing polystyrene molding plant.
- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations applies to the proposed equipment. The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart JJJ, National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins regulation does not apply to the new equipment as the installation only uses polystyrene and does not manufacture the material.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of volatile organic compounds (VOCs) are below de minimis levels.
- This installation is located in Madison County, an attainment area for all criteria air pollutants.

- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the new equipment.
- A revision to the Intermediate Operating Permit application is required for this installation within 30 days of equipment startup. However, the facility can submit a letter to reclassify this facility to Basic Operating Permit status.
- Approval of this permit is recommended without special conditions.

INSTALLATION DESCRIPTION

Versa-Tech, Incorporated is a block molder and fabricator of expandable polystyrene for industrial and commercial uses located in Fredericktown, Missouri. The installation is considered to be a minor source of air emissions for New Source Review purposes. The Operating Permits Section received an Intermediate permit application on January 23, 2003. However, with this permit, Versa-Tech may be reclassified as a Basic State source by Operating Permits Section.

The following permits have been issued to Versa-Tech Incorporated from the Air Pollution Control Program.

Permit Number	Description
102000-012	A Section (6) permit issued on October 11, 2000, for the construction of a new polystyrene molding plant.
112002-015	A Section (6) permit issued on Nov 8, 2002, for the addition of one (1) new polystyrene batch expander to the installation to replace two (2) existing continuous expander units (EP 1)

PROJECT DESCRIPTION

Versa-Tech, Incorporated has applied for authority to add two (2) new curing silos to the installation each with a capacity of 3,000 pounds of material. The installation uses the curing silos to form the raw materials which are first expanded in the expander unit (EP2). VOC emissions occur from the release of pentane during the expansion process. The two (2) new silos will debottleneck the process and allow for a higher throughput through the existing expander unit. The maximum hourly design rate (MHDR) for the increase of throughput is based on the added 6,000 pounds of increased handling capacity divided by the process time. The process time for the two curing silos is equal to 58 hours, which includes time needed for expansion, curing, molding, holding, and cutting of the finished product. The MHDR for the increased throughput is equal to 103 pounds of expanded polystyrene product per hour.

Due to changes in the calculation method and emission factors used for determining potential emissions of the expander, the existing potential emissions were recalculated based on the method of calculation as described in this permit. The existing storage capacity of the facility is 9,000 pounds of material with an estimated process time of 66 hours. Therefore, the MHDR of the expander prior to the addition of the two new silos is 136 pounds per hour.

Please note that the increase in capacity of the expander is not proportional to the time needed for processing. As the total capacity of the silos increase, the only increase in process time is due to curing. Therefore, when all five curing silos are being used, 15,000 pounds of material can be processed in a time of 90 hours. The resulting MHDR of the installation is 167 pounds per hour which is considerably less than when adding the MHDR of the existing expander with that due to the addition of the two new silos (103 lb/hr plus 135 lb/hr = 238 lb/hr). However, to be conservative, credit was not in the potential emissions of the application for the increased efficiencies.

In addition, a couple of discrepancies were found in the previous permits. In Table 2 of Permit No. 102000-012 and Table 1 of Permit No. 112002-015, the reported potential emissions of the application were mis-entered. These values have been corrected and are reflected in the Existing Potential Emissions column of Table 1 of this permit.

EMISSIONS/CONTROLS EVALUATION

The air pollutant of concern for this project is VOC which is being emitted from the expansion of the polystyrene raw material in the form of pentane. This polystyrene material used in the expansion process does not contain any HAPs as reported on the Material Safety Data Sheet (MSDS). The VOC emission factor was calculated based on a maximum eight percent (8%) pentane content for the expandable polystyrene material to be used in this process as indicated in the MSDS for this material. In addition, the VOC emission factor was adjusted based on a U.S. Environmental Protection Agency (EPA) publication (USEPA 450/3-90-020) which indicates that only eighty five percent (85%) of the pentane is lost during the expansion and molding process. No air pollution control equipment will be used in association with the new equipment.

The following table provides an emissions summary for this project. Existing potential emissions were based on Permit Number 102000-012 and new calculations for the expander unit. Existing actual emissions were taken from the installation's 2005 Emission Inventory Questionnaire (EIQ). The potential emissions from this project represent the increase in VOC emissions due to the addition of the two curing silos and assuming 8,760 hours of operation per year.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2005EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	0.4	N/A	N/A	N/A
SO _x	40.0	0.03	N/A	N/A	N/A
NO _x	40.0	5.6	N/A	N/A	N/A
VOC	40.0	50	39.58	30.68	N/A
CO	100.0	4.7	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOCs are below de minimis levels.

APPLICABLE REQUIREMENTS

Versa-Tech, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted without special conditions.

Susan Heckenkamp
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 8, 2006, received August 21, 2006, designating Versa-Tech, Inc. as the owner and operator of the installation.
- Southeast Regional Office Site Survey, dated August 29, 2006
- MSDS

Ms. Phyllis Maynard
Manager of Quality/Safety
Versa-Tech, Inc.
701 Sargent Drive
Fredericktown, MO 63645

RE: New Source Review Permit - Project Number: 2006-08-045

Dear Ms. Maynard:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your revised operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH: shk

Enclosures

c: Southeast Regional Office
PAMS File: 2006-08-045

Permit Number: